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ABSTRACT

These papers were presented as a symposium on the revision of the general education program at the University of Montevallo (UM) in Alabama. The first paper, "Introduction to Evaluation of General Education at the University of Montevallo," by Patricia S. Ernest and Elizabeth H. Rodgers, describes the core curriculum study and the 13 general education components of the University of Montevallo program and presents the evaluation model. The second paper, "Design of the Montevallo Evaluation," by Julia S. Rogers and James E. McLean, reports two aspects of the project: (1) an analysis of the extent to which the educational outcomes assessed by the College Outcome Measures Project (COMP) correspond to the goals of UM's core curriculum; and (2) a pilot questionnaire study of UM faculty to determine the extent to which they are addressing program goals. "Results of the Montevallo Evaluation," by Kathleen Bolland and Julia S. Rogers, details the outcomes of the faculty survey. "Implications of Evaluation of General Education at the University of Montevallo," by Patricia S. Ernest, reviews four evaluation activities impacted by faculty questionnaire results: (1) reliability of the COMP tests as a measure of general education; (2) process of revision of courses; (3) faculty participation in review and revision of courses; and (4) determination of core goals not being assessed currently. (LMO)

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Evaluation of the General Education Program at the University of Montevallo

Symposium at the Annual Meeting of the

Mid-South Educational Research Association
Memphis, Tennessee
November 21, 1986

Patricia S. Ernest, Organizer

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INTRODUCTION TO EVALUATION OF GENERAL EDUCATION AT THE UNIVERSITY OF MONTEVALLO

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Presented as part of a symposium titled
"Evaluation of the General Education Program
at the University of Montevallo"

Patricia S. Ernest, Organizer

at the

Annual Meeting
of the
Mid-South Educational Research Association
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Introduction

The forthcoming report of the Carnegie Foundation for the Advancement of Teaching, College: The Undergraduate Experience, contains "major recommendations" for strengthening higher education, according to the preview of this report that appeared in The Chronicle of Higher Education on November 5, 1986 (Scully, 1986). A significant number of the recommendations have already become a reality at the University of Montevallo as a result of the recent revision of the General Education Program.

Before embarking on a study of the core curriculum, Montevallo undertook an institutional mission and goals study that had the effect that the Carnegie report ascribes to such efforts: it helped create an environment conducive to reexamining assumptions, and it helped establish common ground for curricular decision making ("The Next Decade," 1978).

The core curriculum study centered around goals of the UM Core Educational Program that were in turn consistent with the overall institutional goals. The recommendations of the study committee, developed through extensive consultation with faculty, administration, and students, included thirteen general education components ("A Proposal to," 1983). These thirteen components relate directly to one or more of the seven areas of inquiry that Ernest Boyer and his associates at the Carnegie Foundation suggest should

be a part of the General Education Program at every university.

To begin with, Boyer lists "Language: The Crucial Connection" as an essential area of inquiry that a core curriculum should address. The UM curriculum (see Appendix) requires a total of twenty-one hours in written and oral communication that extend from the freshman year through the senior year. Three of the seven required courses are called foundation courses. Foundations in Writing, consisting of two three-hour courses spanning the freshman year, present writing both as a means of learning and as a means of communicating what one learns. The courses help students understand the writing process and give them experiences with writing tasks that are common to all academic writing. Students are also required to take a three-hour course in Foundations in Oral Communication, a course that develops the ability to communicate orally in small groups as well as in larger ones. Twelve hours of Writing Reinforcement Courses (WR), to be taken through the sophomore, junior, and senior years, build on the freshman courses in Foundations in Writing. The WR requirement, by the way, does not necessarily involve hours beyond the students' program requirements. Writing Reinforcement courses can count twice - toward the major or the minor, for example, as well as toward the WR requirement. Thus, three components of the UM core - Foundations in Writing, Foundations in Oral

Communication, and Writing Reinforcement - address the area that Boyer calls "Language: The Crucial Connection."

Two other components of the program also deal with symbol systems and, for that reason, can also be grouped under the heading "Language: The Crucial Connection." One is the three-hour required mathematics course at the level of College Algebra or above. The other is a one-hour course in Introduction to the Computer, which includes consideration of ethical questions raised by computers as well as a look at the rapidly changing technology.

Boyer's second area of inquiry, "Art: The Aesthetic Experience," addresses knowledge, skills, and attitudes that are central to two of UM's core components. One is Integrated Arts, an innovative course in music, theatre, and the visual arts that helps students understand the common ground that these art forms share as well as some of the distinctive characteristics that differentiate one art form from another. This required three-hour course is centered on principles of art and approaches to art rather than on hands-on experience with one or more of the arts, but it does include required attendance at campus productions, performances, and exhibits.

The required six-hour course in World Literature, usually taken in the sophomore year, bridges two of Boyer's categories, "Art: The Aesthetic Experience", and "Heritage: The Living Past". Students are invited to study major works

of western literature in the context of works by African, Asian, and Latin American authors. They are prepared for this crosscultural approach to literature by their required six-hour freshman history course, World Civilizations. Taken together, World Civilizations and World Literature constitute the center of the global humanities dimension of the General Education Program. Both courses broaden and deepen the students' understanding of what the Carnegie Report calls "Heritage: The Living Past."

The fourth category in the Carnegie Report, "The "Social Web," is addressed at Montevallo through a guided distribution requirement called Institutions and Issues. This six-hour requirement can be satisfied by any two of about two dozen courses designed and duly approved for this purpose. The majority of the courses in this category are in history or in one of the social sciences, but all of them are designed to promote understanding of the relationships between contemporary institutions and issues and to enable students to participate as responsible, informed citizens in a democratic society and in a global community.

The fifth Carnegie category - "Nature: The Ecology of the Planet" - is addressed by UM's seven-hour guided distribution requirement called Principles of Science: at least one of the two required courses must include laboratory experiences, and both courses present the sciences as problem-solving enterprises.

"Work: The Value of Vocation," which constitutes the sixth tier in the Carnegie structure, is addressed directly through the one-hour course for freshmen entitled Introduction to the University Experience. In this course, which attempts to bridge the worlds of high school and college on the one hand and the worlds of college and productive employment on the other, students are encouraged to explore career options.

Finally, the Carnegie Report lists "Identity: The Search for Meaning," as the seventh area of inquiry indispensible to a general education core. Montevallo's three-hour guided distribution requirement called Human Behavior and Inquiry centrally addresses this topic through course options in psychology, philosophy, and religion. Again, all these courses have been approved formally for credit under this category. In addition, the Montevallo requirement in Health, Physical Education, and Recreation addresses this topic, since the four required hours emphasize principles of lifelong wellness and activities that promote fitness.

These thirteen components of the UM program comprise general education requirements of 49 hours, or 38% of the 130 hours required for graduation.

From the beginning of the core study in 1980, there was a commitment to what the Carnegie Report calls in recommendation XIII "Measuring the Outcomes." This

commitment grew in the spring of 1983 after almost 75% of the faculty voted to approve the proposed curriculum revision. At that time, an evaluation subcommittee was appointed as we prepared to implement the revised program with the freshmen entering in June of 1985.

Evaluation

Upon completion and overwhelming faculty acceptance of the revision of the core curriculum, the subcommittee felt positive that the general education experiences of students at the University of Montevallo would be improved. However, the effectiveness of the curriculum as designed can be determined only by its impact on the students. The evaluation subcommittee, with representation from faculty, students, and administration, sought to answer the question, "Will students leave the University of Montevallo with an increased ability to participate in the global community, to be self-educating, to work creatively and effectively, and to lead satisfying personal lives?" (Core Curriculum Committee, 1983, p.4). It was determined that these questions cannot be answered merely by GPA's or end of course examinations. These abilities are developed by the summation and connections of a student's total experience. Therefore, a model of evaluation evolved to determine the instructional validity from student assessment measures and the curricular validity through faculty assessment.

Model

The model of evaluation is described as the general strategy for conducting an evaluation. The model developed at the University of Montevallo is composed of components which provide the input to the general education goals and the components which assess the outcomes of the goals (see Figure 1). The model was designed to answer the basic evaluation questions of what to evaluate, how evaluation should be accomplished, why evaluation is being conducted, and for which constituent groups the results are intended.

Initial efforts in 1983-1984 were directed toward identification of a measure of student general education outcomes. The seniors of 1984 were the last students that were products of the previous general education (distribution requirements) program. Therefore, their outcomes were needed to establish baseline data. Criteria for an instrument included (a) objectives consistent with the UM program, (b) standardized format with research-based validity and reliability studies, (c) institutional participants similar to UM, and (d) national norms available. The decision was made to use the COMP (College Outcome Measures Project) Test from the American College Testing Program (ACT).

The COMP Program, begun in 1976, utilized input on general education by 160 institutions. After a series of reliability studies, the objectives of the program were

shown to be correlated with the abilities relevant to functioning effectively in adult roles.

The Objective form of COMP was chosen because of its three-hour administration and ACT scoring. The instrument consists of three content areas, Functioning within Social Institutions, Using the Arts, and Using Science and Technology, and three process areas, Clarifying Values, Solving Problems, and Communicating. Various audiovisual and print materials drawn from adult situations serve as the stimulus for items in which the students utilize one of the process areas to respond to one of the content areas.

A self-selected sample of the seniors of 1984 provided the baseline data. Beginning with the 1985 freshmen, COMP will be administered as an entry/exit measure to more accurately determine growth in the specified general education objectives.

The second area of measurement of student outcomes is writing. The writing component comprises a significant portion of the requirements in the UM curriculum; however, writing skills are not assessed in the Objective form of COMP. Therefore, the University Writing Committee is implementing a writing assessment program. At entry, students write essays which serve the purposes of placement and preassessment. Plans are to track the writing skills of selected students throughout their four years. Exit level

writing samples will provide a basis for determining gains in writing skills.

Response to measures such as the Learning Oriented Goal Oriented scale will provide data for the third area of student outcomes.

The second component of the evaluation model is designed to determine perceptions of the effectiveness of the content and experiences in the core curriculum and its impact on students and the institution. Current and longitudinal perceptions will be elicited from the constituent groups such as faculty, students, alumni, graduate schools, and employers.

The goal-free outcomes are sought in the third component. For example, case studies of thought processes of selected students and entries in student journals may reveal outcomes that were unanticipated and would be considered goal-free. Interviews with UM faculty as well as graduate school personnel and employers may document goal-free outcomes. These data contribute to a complete evaluation of the core curriculum.

The evaluation model includes a component to assess the instructional validity of the core program. A faculty questionnaire was designed to determine the extent to which each general education course addresses core goals and COMP objectives. Other types of course evaluations and tracking

of courses students complete within the core will provide additional data.

What began as an effort to select a national evaluation instrument to use with UM students has led so far to an institution-wide policy of administering ACT'S COMP as a pretest to incoming freshmen and as a post-test to seniors. What began as an effort to develop a faculty questionnaire to assess the degree to which the approved general education courses were meeting the goals of the general education program and the degree to which COMP actually measures the students' achievement of general education goals has resulted in a model of our evaluation efforts that may well have application at other institutions involved in similar efforts to revitalize general education.

This symposium presents the research design, results, and implications of the evaluation of the General Education program.

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APPENDIX

PURPOSES AND GOALS

APPROVED GENERAL EDUCATION COURSES

CORE EDUCATIONAL PROGRAM

UNIVERSITY OF MONTEVALLO

Statement of Purposes and Goals of the Core Educational Program University of Montevallo

The core educational program of the University of Montevallo introduces students to a broad spectrum of knowledge and experiences designed to develop the mind, the emotions, the spirit, and the body. The purposes of the program are to enable students to participate as responsible, informed citizens in a democratic society and in the global community; to become self-educating individuals; to work creatively and effectively; and to lead satisfying personal lives.

To accomplish these purposes, the core educational program enables students to attain the following goals:

1. To develop skills in the use and interpretation of symbol systems which employ words, numbers, and visual/aural imagery; specifically,
   a. to develop the ability to use and interpret language in written and spoken forms
   b. to develop the ability to use and interpret mathematical structures
   c. to develop the ability to interpret other visual and auditory symbol systems.
2. To develop the ability to use rational processes in consideration of ideas and problems, including the ability to make judgments based upon description, analysis, and interpretation.
3. To search for and develop personal, family, and community values through a study of the past, its vitality in the present, and its relevance to the future; specifically, by enabling students
   a. to analyze human development and behavior
   b. to understand the history of ideas
   c. to learn about political, social (family and community), economic, philosophical, and religious systems by which humanity has organized itself.
4. To develop the ability to explore and appreciate the imaginative presentation of human experience through literary, visual, performing, and other arts.
5. To become knowledgeable about the physical and biological structure of nature, the place of humanity in the natural world, and the ethical, economic, and political dimensions of humanity's impact on the environment.
6. To apply knowledge about health, nutrition, physical activity, and aesthetics to their personal lives and environments and to their communities.
7. To develop the ability to engage in effective interpersonal relationships, to understand their responsibilities in the American democratic community and in the world-wide human community, and to understand leadership roles.
8. To develop inner resources such as imagination, a sense of wonder, self-discipline, and a habit of critical inquiry so that they may engage in lifelong, self-directed learning.
9. To affirm the value of work and leisure, to become aware of the wide range of career and leisure opportunities through which they may make contributions to society and achieve personal satisfaction, and to develop the self-knowledge, the competencies, and the qualities of mind (see Goals 1-8 above) which contribute to successful employment and fruitful living.
10. To become knowledgeable about the prospects for change occurring in their lifetimes and in subsequent generations so that they may be able to adapt to new conditions and to demonstrate responsible, creative leadership in shaping a changing world.

Specific Courses Designed To Meet The New General Education Requirements At

THE UNIVERSITY OF

MONTEVALLO

"Montevallo is both a distinctive and a distinguished institution of higher learning. Its purposes and its programs in a singular way meet the educational needs of American society and the individual students who choose to attend it. Its academic superiority is one of the best kept secrets in the community of learning."

Dr. Earl J. McGrath
Former U.S. Commissioner of Education

List of Approved General Education Courses

Required Core Courses:

UE 100 (Introduction to the University Experience) ..... 1 hour
ENG 101-102 (Foundations in Writing)* ..... 6 hours
Option for advanced students: ENG 103-104
CA 101 (Foundations in Oral Communication) ..... 3 hours
MATH 144 (College Algebra)* ..... 3 hours
Options: Mathematics above the level of MATH 144
HIST 101-102 (World Civilizations) ..... 6 hours
ENG 231,232 (World Literature)** ..... 6 hours
FA 116 (Integrated Arts) ..... 3 hours

Requirements Within Distribution Categories:***

Introduction to the Computer ..... 1 hour
Options:
CS 105 1 hour
ED 105 1 hour
CS 161 3 hours
MG 161 3 hours
ED 237 3 hours

Principles of Science ..... 7 hours
(Courses in two branches of science, including one course with a laboratory)
Options: CHEM 100, 101, 121-122;
BIO 100 (no lab), 101-102; GEOL 110, 115;
PHY 100, 201, 202, 240, 242.

Health, Physical Education, and Recreation ..... 4 hours
(2 hours in Health/Wellness courses and 2 hours in activity courses, 1 hour of which must be in a lifelong activity.)

Writing Reinforcement** ..... 12 hours
(NO ADDITIONAL HOURS REQUIRED; 6 hours in sophomore year, 3 in junior year, 3 in senior year.)

Human Behavior and Inquiry ..... 3 hours
Options:
PHIL 210 (Introduction to Philosophy) ..... 3 hours
PSYC 101 (General Psychology) ..... 3 hours
REL 240 (Eastern Religions) ..... 3 hours

*Some students may be advised to enroll in preparatory courses.
**This component refers to the process of decision-making as it relates to writing in May 1985.
***In some cases, the student's choice of major will determine which of these courses should be taken within a given distribution category.

Institutions and Issues ..... 6 hours
Options:
HIST 402 (The Soviet Union) ..... 3 hours
HIST 459 (Europe Since 1945) ..... 3 hours
POS 200 (American National Government) ..... 3 hours
POS 215 (Energy, Resources, and the Environment) ..... 3 hours
POS 300 (American State and Local Government) ..... 3 hours
POS 340 (World Peace) ..... 3 hours
ANT 200 (Introduction to Anthropology) ..... 3 hours
ANT 320 (Cultural Anthropology) ..... 3 hours
SOC 230 (Introduction to Sociology) ..... 3 hours
SOC 240 (Contemporary Social Problems) ..... 3 hours
SOC 331 (Marriage and the Family) ..... 3 hours
HED 402 (Marriage and Family Relationships) ..... 3 hours
SWK 130 (Social Welfare in Contemporary Society) ..... 3 hours
SWK 330 (Health Care Today & Tomorrow) ..... 3 hours
EC 231 (Introduction to Macroeconomics) ..... 3 hours
EC 232 (Introduction to Microeconomics) ..... 3 hours
IIS 450 (Contemporary Global Issues: An Intercultural Approach) ..... 3 hours

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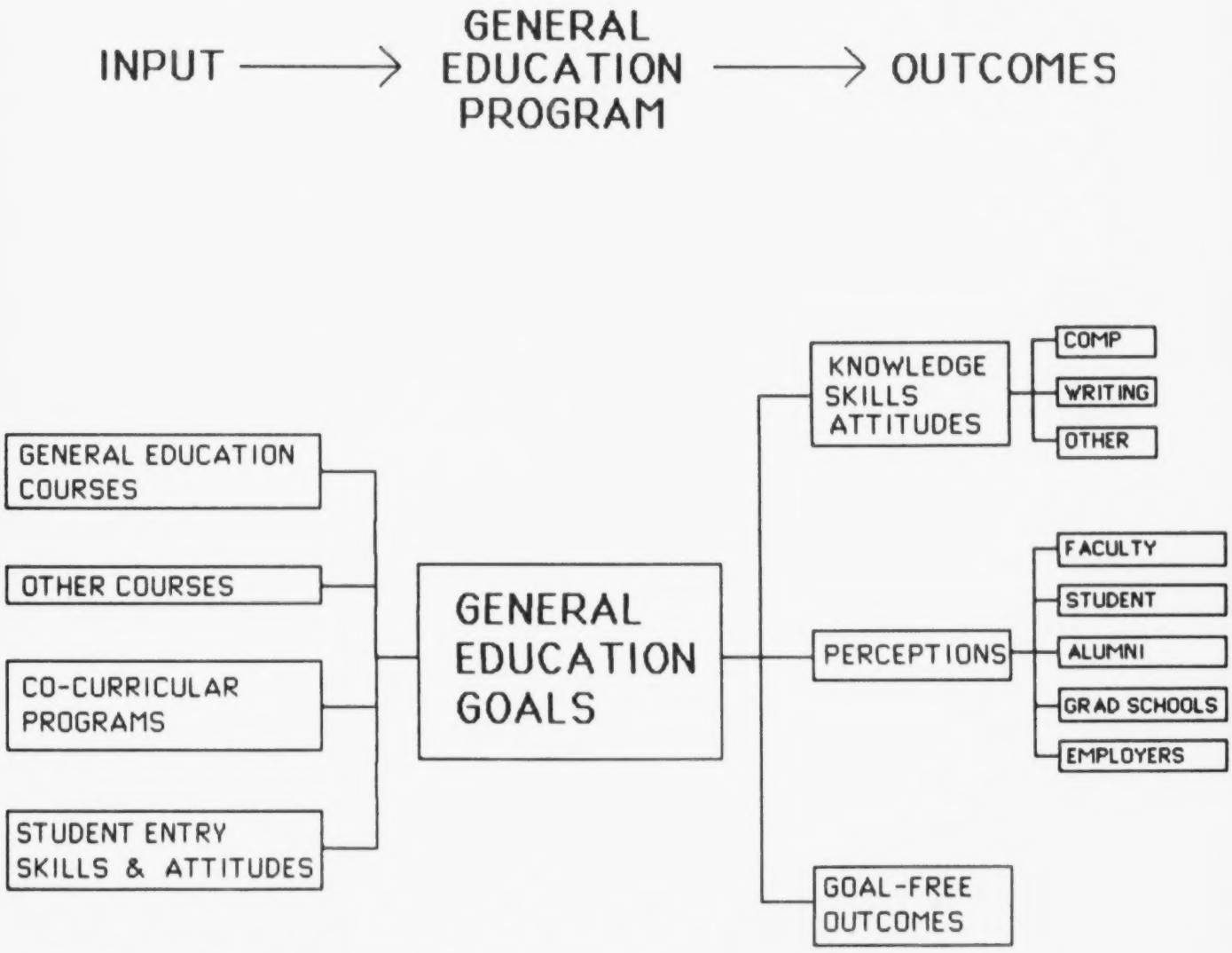
The General Education Committee, the Standing Committee on the General Education Program, approves courses that satisfy program objectives and requirements. The Committee also monitors the program and evaluates the extent to which it is meeting established goals. Voting members of the Committee are ten elected representatives from the faculty and staff and a student recommended by the Student Government Association. Non-voting members are the Vice President for Academic Affairs (an ex-officio member) and the Director of General Education, who serves as chair of the Committee.

FIGURE 1

A MODEL OF GENERAL EDUCATION EVALUATION

AT THE UNIVERSITY OF MONTEVALLO


INPUT
GENERAL EDUCATION PROGRAM
OUTCOMES
GENERAL EDUCATION COURSES
OTHER COURSES
CO-CURRICULAR PROGRAMS
STUDENT ENTRY SKILLS & ATTITUDES
GENERAL EDUCATION GOALS
KNOWLEDGE SKILLS ATTITUDES
COMP
WRITING
OTHER
PERCEPTIONS
FACULTY
STUDENT
ALUMNI
GRAD SCHOOLS
EMPLOYERS
GOAL-FREE OUTCOMES

DESIGN OF THE MONTEVALLO EVALUATION

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The University of Alabama

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Evaluation and Assessment Laboratory
The University of Alabama

Presented as part of a symposium titled
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DESIGN OF THE MONTEVALLO EVALUATION

Within the overall evaluation model (see Figure 1), the portion of the project reported here involved two aspects: (a) an analysis of the extent to which the educational outcomes assessed by the College Outcomes Measurement Program (COMP) test correspond to the goals of the Core Curriculum of UM's General Education program, and (b) a pilot questionnaire study of UM faculty to determine the extent to which they are currently addressing the goals of the General Education Program (and, coincidentally, the goals of COMP). The pilot questionnaire study covered only those courses approved for General Education credit and which were taught in spring 1986. After analysis of those results, the questionnaire was to be revised for use in the Fall of 1986 for additional General Education courses, and later for surveying all courses in the UM curriculum. The General Education Committee (GEC) of the University of Montevallo contracted with the Evaluation and Assessment Laboratory (EAL) of the College of Education at the University of Alabama to assist in the evaluation of the new Core Curriculum.

One EAL staff member working on the project as a research assistant (Rogers) is also a faculty member at UM and a member of the GEC and its Evaluation Subcommittee, which facilitated coordination of the project. The analysis of the relationship between the CORE goals and COMP goals was done primarily by this staff member working with other members of UM GEC's Evaluation subcommittee. The questionnaire was developed by EAL staff member Bolland.

Relationship between UM General Education goals and COMP. A matrix was developed showing the relationship between the goals of the UM General Education program and the goals of the COMP exam. Goal statements were taken directly from official documents of the UM GEC and the ACT COMP test manual. Since the extent to which the UM General Education goals were being addresses was the primary issue, these goals served as the principal organizing factor in the matrix. The resulting matrix is shown in Figure 2.

The matrix showing the relation between UM General Education Goals and the COMP exam goals includes a column (3) indicating the actual COMP questions that appear to be related to each GE Goal. UM General Education Goals 1 through 5 and Goal 10 all seem to be closely related to COMP Goals, with the exception that part "b" of UM Goal 3 ("to understand the history of ideas") has no corresponding Comp Goal. UM Goals 6 through 9 appear also to not be covered by the COMP test. The GEC should look for other ways to assess the achievement of these Goals. In addition, even where there appears to be agreement between UM Goals and COMP Goals at the goal statement level, it would be advisable to look at the individual COMP items to see if they really seem to be assessing the goals they are supposed to assess. Perhaps a representative group of UM faculty could take the COMP test, or at least go through it thoroughly, specifically attending to the way in which various goals are being measured by specific items and evaluating if this corresponds to the intent of the UM General Education goals.

Pilot questionnaire study. During spring semester 1986 the staff of the EAL, in consultation with the Evaluation Subcommittee of the UM GEC, developed a faculty questionnaire to assess the extent to which the UM General Education goals and the COMP test goals were being addressed in courses. Faculty were

asked to indicate whether each statement indicated outcomes which were a "major emphasis," "minor emphasis," or "no emphasis" in their courses. Questions were developed directly from UM and COMP goal statements, using the CORE/COMP matrix. Questionnaire items were developed to follow the wording of the goals as nearly as possible, with modifications made to improve clarity, avoid duplication, and make each item ask only one question. Thus, for example, Core Goal 1 is covered by six questionnaire items, and questionnaire item 19 addresses Core Goal 3.a. and four related COMP goals. Column (4) of the CORE/COMP matrix shows the questions from the faculty survey questionnaire that address each goal.

This questionnaire was distributed by GEC to all faculty at UM who were currently teaching approved General Education courses (N=75). If a faculty member was teaching more than one approved course, a questionnaire was sent for each such course. Multiple sections of the same course taught by the same faculty member were treated as a single course, however. Sixty-one responses were returned. This represented an 81% return rate and at least one faculty response for every distinct General Education course taught in spring semester, and for many courses responses were received from all of the faculty teaching the course. A breakdown of the number of responses from each Core area is given in Table 1. In spite of the high return rate, there were relatively few returns from English courses (only three of eight faculty teaching the second semester of Foundations of Writing responded), although English and writing have a heavy emphasis in the Core. Because of the large number of one-hour PE course options offered and a high rate of return from that department, almost one-third of all respondents were from Health and PE but only four hours of the 42-hour Core Curriculum are from this area. The

disproportionate representation of Core areas will be considered in the analysis of the results. One possible revision of the design might be to weight the responses by the student credit hours of the course represented.

Table 1

Number of Responses by Core Areas

Core Area	# responding
University Experience	1
Integrated Arts	1
Foundations of Writing	6
Oral Communication	1
Math	2
World Civilization	2
Science	12
Human Behavior and Inquiry	2
Computer Science	3
Institutions and Issues	9
Health and Physical Education	22
Total	61

FIGURE 1

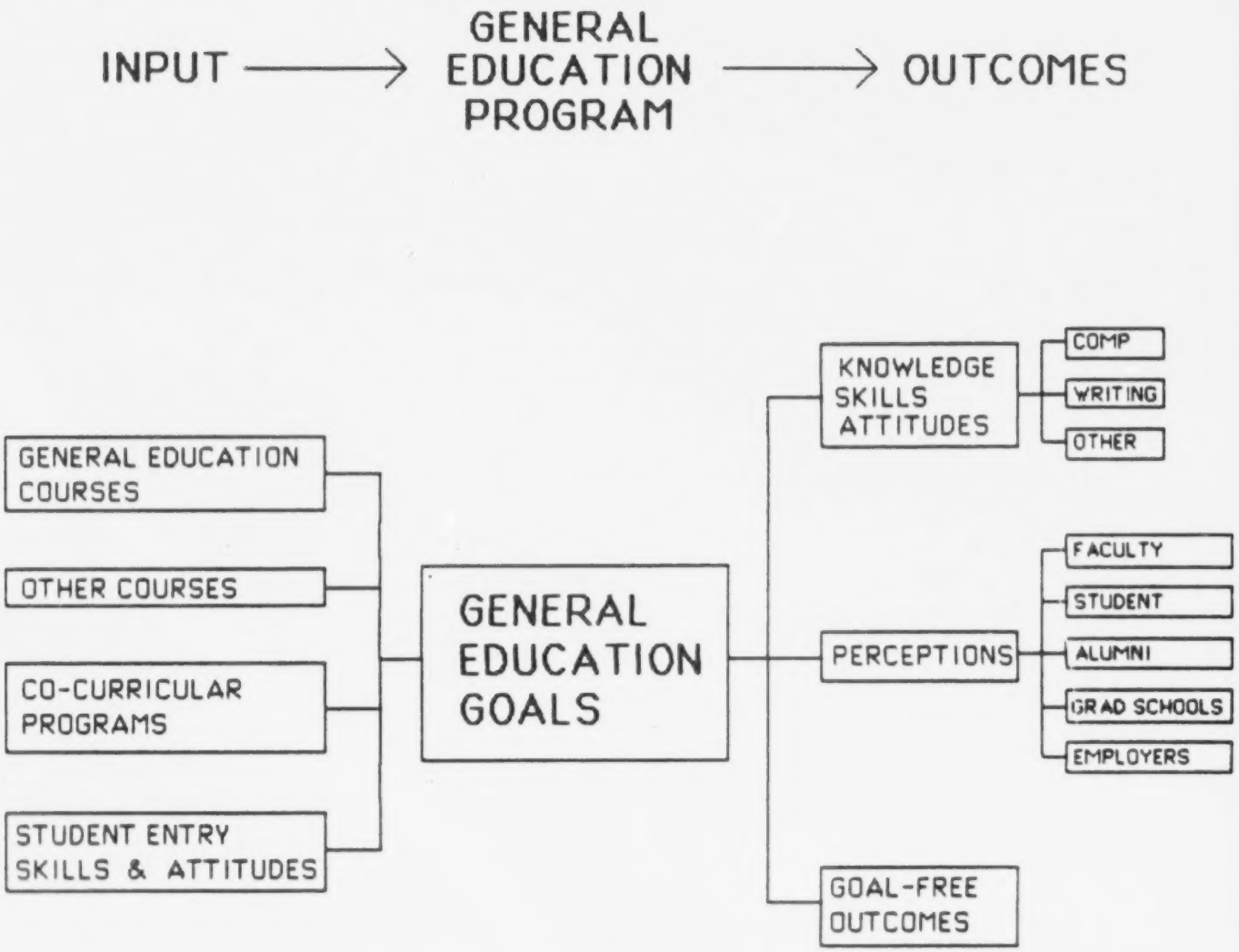
INPUT
GENERAL EDUCATION PROGRAM
OUTCOMES
GENERAL EDUCATION COURSES
OTHER COURSES
CO-CURRICULAR PROGRAMS
STUDENT ENTRY SKILLS & ATTITUDES
GENERAL EDUCATION GOALS
KNOWLEDGE SKILLS ATTITUDES
COMP
WRITING
OTHER
PERCEPTIONS
FACULTY
STUDENT
ALUMNI
GRAD SCHOOLS
EMPLOYERS
GOAL-FREE OUTCOMES

FIGURE 2

File: REL MATRIX

CORE GOALS	COMP GOALS	COMP QUESTIONS	FACULTY SURVEY QUESTIONS
1. To develop skills in the use and interpretation of symbol systems which employ words, numbers, and visual/aural imagery; specifically			
1.a. to develop the ability to use and interpret language in written and spoken forms	A. Can receive information from oral presentation, media presentations, and nonverbal cues. B. Can send information via speech, media, and nonverbal presentations. C. Can receive information from written materials. D. Can send information using written materials.	1-2,7-8,13-14 103-104,109-110,115-116 55-56,63-64,71-72 79-80,87-88,95-96	1. To be able to understand, analyze, and/or interpret written or spoken language 4. To be able to transmit verbal (oral and/or written) information
1.b. to develop the ability to use and interpret mathematical structures	E. Can receive information from numeric and graphic representations. F. Can send information using numeric and graphic representations.	19-20,31-32,43-44 21-22,33-34,45-46	2. To be able to understand, analyze, and/or interpret mathematical structures (in numeric and/or graphic form) 5. To be able to transmit numeric and/or graphic information
1.c. to develop the ability to interpret other visual and auditory symbol systems	A. Can receive information from oral presentation, media presentations, and nonverbal cues. B. Can send information via speech, media, and nonverbal presentations.	1-2,7-8,13-14 103-104,109-110,115-116	3. To be able to understand, analyze, and/or interpret nonmathematical, visual, or auditory symbol systems 6. To be able to transmit nonverbal information
2. To develop the ability to use rational processes in consideration of ideas and problems, including the ability to make judgments based upon description, analysis, and interpretation.	G. Can identify and define problems (objectives and constraining factors). H. Can select approaches to solve problems. I. Can generate possible solutions, hypotheses, or testable propositions. J. Can collect various forms of information ('data') regarding proposed solutions with respect to a problem and its constraints. K. Can determine the logical consistency among the information obtained, the	3-4,9-10,15-16 107-108,113-114,119-120 57-58,65-66,73-74 59-60,67-68,75-76 85-86,91-92,99-100	7. To be able to analyze problems (identify, define, select approaches) 8. To be able to select or create solutions to problems (e.g., generate hypotheses, collect information, analyze information, evaluate probable effects of solutions) 9. To be able to evaluate problem-solving processes 10. To develop the ability to make rational judgments based on description, analysis, and interpretation of ideas and

	problem as defined, and the hypotheses or solutions proposed.		
	L. Can determine the solution to be implemented.	83-84,93-94, 101-102	
	M. Can propose or select procedures to evaluate ('confirm' the appropriateness of) the solution chosen for implementation.	23-24,35-36, 47-48	
	N. Can evaluate the process by which a problem was 'solved.'	25-26,37-38, 49-50	
	P. Can assess a set of values for internal consistency.	105-106,111-112, 117-118	
	Q. Can identify the major influence in the development of values in individuals.	61-62,69-70, 77-78	
	R. Can analyze rationales for value choices.	81-82,89-90, 97-98	
	S. Can infer personal values from behavior.	27-28,39-40, 51-52	
	T. Can analyze the implications of decisions made on the basis of values.	29-30,41-42, 53-54	
3. To search for and develop personal, family, and community values through a study of the past, its vitality in the present, and its relevance to the future; specifically, by enabling students			
3.a. to analyze human development and behavior	Q. Can identify the major influence in the development of values in individuals.	61-62,69-70, 77-78	19. To analyze human development and behavior
	S. Can infer personal values from behavior.	27-28,39-40, 51-52	
	T. Can analyze the implications of decisions made on the basis of values.	29-30,41-42, 53-54	
	3. Can explain the reciprocal relationship between social institutions and individuals.	55-56,57-58, 59-60,61-62	
3.b. to understand the history of ideas			31. To understand the history of ideas
3.c. to learn about political, social (family and community), economic,	O. Can identify the major values, and issues usually	5-6,11-12,17-18	15. To develop personal values through studying the past in relationship to the

philosophical, and religious systems by which humanity has organized itself	faced, in daily adult life in one's own and other cultures. 1. Can identify those activities and institutions which constitute the social aspects of a culture. 2. Can describe the structure and functions that underlie social institutions. 3. Can explain the reciprocal relationship between social institutions and individuals. 5. Can explain the implicit restraints and freedoms within the social institutions, and can protect how degree of involvement places one in a conflicting or compatible state.	1-2,3-4,5-6 103-104,107-108,105-106 55-56,57-58,59-60,61-62 19-20,21-22,23-24,25-26,27-28,29-30	present and future 16. To develop family values through studying the past in relationship to the present and future 17. To develop community values through studying the past in relationship to the present and future 23. To understand one or more of the systems (political, social, economic, philosophical, religious) by which humanity is organized 24. To describe the structures and functions that underlie social institutions 25. To explain the reciprocal relationship between social institutions and individuals 26. To identify the activities and institutions that constitute the social aspects of a culture 27. To explain the restraints and freedoms within social institutions 28. To predict how degree of involvement in social institutions places one in a conflicting or compatible state 30. To explain the principles of the development and change of social institutions
4. To develop the ability to explore and appreciate the imaginative presentation of human experience through literary, visual, performing, and other arts	11. Can identify those activities and products which constitute the artistic/humanistic aspects of a culture 12. Can describe the elements (e.g. sensory, compositional, expressive, and substantive) that constitute artistic/humanistic activities and products. 13. Can explain the impact of artistic/humanistic expressions on individuals. 14. Can explain the development of aesthetic awareness and theory from a number of perspectives. 15. Given the characteristics of a culture, can judge which of several artistic/humanistic expressions would be most	13-14,15-16,17-18 115-116,119-120,117-118 71-72,73-74,75-76,77-78 95-96,99-100,101-102,97-98 43-44,45-46,47-48,49-50,51-52,53-54	34. To explore and appreciate the imaginative presentation of human experience through the arts (visual, literary, performing, and other) 35. To identify the activities and products that constitute the artistic/humanistic aspects of a culture 36. To describe the elements that constitute artistic/humanistic aspects of a culture 37. To explain the impact of artistic/humanistic expressions on individuals 38. To explain, from a number of perspectives, the development of aesthetic awareness and theory 39. To be able to judge which of several artistic/humanistic expressions would be most congruent with given characteristics of a culture

	congruent with those characteristics.		
5. To become knowledgeable about the physical and biological structure of nature, the place of humanity in the natural world, and the ethical, economic, and political dimensions of humanity's impact on the environment.	6. Can identify those activities and products which constitute the scientific/ technological aspects of a culture.	7-8,9-10,11-12	40. To become knowledgeable about the physical and biological structure of nature 41. To understand the place of humanity in the natural world
	7. Can describe scientific concepts, laws or principles that underlie scientific/ technological activities and products.	109-110,113-114, 111-112	42. To become knowledgeable about the ethical, economic, and political dimensions of humanity's impact on the environment
	8. Can explain the impact of technology on the natural (physical and biological) environment in which it occurs.	63-64,65-66, 67-68,69-70	43. To identify the activities and products that constitute the scientific/ technological aspects of a culture 44. To describe scientific concepts, laws, or principles
	9. Can explain the impact of technology on the institutional and his/her culture.	87-88,91-92, 93-94,89-90	45. To explain technology's impact on physiological and biological environments
	10. Can predict the consequences of the introduction of technology into a culture, including considerations of the scientific principles involved and of the environmental and cultural impacts of technique.	31-32,33-34, 35-36,37-38, 39-40,41-42	46. To explain technology's impact on the individual and his/her culture 47. To predict the environmental and cultural consequences of introducing technology into a culture
	T. Can analyze the implications of decisions made on the basis of values.	29-30,41-42, 53-54	
6. To apply knowledge about health, nutrition, physical activity, and aesthetics to their personal lives and environments and to their communities.			48. To apply knowledge about health, nutrition, physical activity, and/or aesthetics to their lives and environments
7. To develop the ability to engage in effective interpersonal relationships, to understand their responsibilities in the American democratic community and in the world-wide human community, and to understand leadership roles.			29. To understand one's responsibilities in the American and world-wide communities 32. To understand leadership roles
8. To develop inner resources such as			11. To develop the inner resources (e.g.,

imagination, a sense of wonder, self-discipline, and a habit of critical inquiry so that they may engage in lifelong, self-directed learning.			imagination, self-discipline, habit of critical inquiry) necessary for life-long, self-directed learning
9. To affirm the value of work and leisure, to become aware of the wide range of career and leisure opportunities through which they may make contributions to society and achieve personal satisfaction, and to develop the self-knowledge, the competencies, and the qualities of mind (see Goals 1-8 above) which contribute to successful employment and fruitful living.			21. To affirm the value of work and leisure 22. To become aware of the wide range of career and leisure opportunities through which one may make contributions to society and achieve personal satisfaction
10. To become knowledgeable about the prospects for change occurring in their lifetimes and in subsequent generations so that they may be able to adapt to new conditions and to demonstrate responsible, creative leadership in shaping a changing world.	4. Can explain the principles of the development and change of social institutions. 9. Can explain the impact of technology on the institutional and his/her culture. 10. Can predict the consequences of the introduction of technology into a culture, including considerations of the scientific principles involved and of the environmental and cultural impacts of technique.	79-80,85-86, 83-84,81-82 87-88,91-92, 93-94,89-90 31-32,33-34, 35-36,37-38, 39-40,41-42	33. To become knowledgeable about the prospects for change in the near and far-distant future 30. To explain the principles of the development and change of social institutions

RESULTS OF THE MONTEVALLO EVALUATION

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Presented as part of a symposium titled
"Evaluation of the General Education Program
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Patricia S. Ernest, Organizer

at the

Annual Meeting
of the
Mid-South Educational Research Association
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RESULTS OF THE MONTEVALLO EVALUATION

As previously mentioned, there were peculiarities in the sample which preclude a straightforward analysis of the overall results. For example, a combination of selective under-response by English faculty and an inherent disproportion of faculty teaching courses in PE to the weighting of PE in the Core make the overall percentages of responses to individual goals misleading. More detailed breakdowns of goals and items by Core areas and specific courses give a clearer picture of the actual emphasis on goals within courses.

There were a few questions that were not answered by all faculty members responding. Some of these were apparently accidental omissions. In other cases (for example, questions 3, 38, and 39), one or more respondents expressed confusion over what the question was asking. In addition, five respondents did not answer any of the questions on the last page of the questionnaire--they apparently did not turn the page. Before fall administration of the questionnaire to faculty teaching other courses the format was revised to call attention more forcefully to questions on the last page.

There were errors and omissions in responses to demographic questions (e.g., whether or not course was classified as Writing Reinforcement (WR), Institutions and Issues (I&I), etc.), but these were corrected before the data were tabulated. Having a person responsible for "cleaning" the answer sheets who was intimately familiar with the Core courses at UM and their classification thus improved the accuracy of the data.

Reliability and validity. Individual response protocols were scanned to see if anyone answered all 1s, all 2s, or all 3s (indicating all major emphasis, all minor emphasis, or all not relevant, respectively), or if anyone

failed to give any 1s or 3s. No such responses patterns were noted, although one respondent did fail to mark any item as a "Major Emphasis," and another failed to mark any "Minor Emphasis." We do not know whether this was: (a) a response bias; (b) a failure to understand the intended meaning of "Major" and "Minor" Emphasis; or (c) an indication that no goal did receive major (or minor) emphasis in the respondent's course. For the revised questionnaire, consideration should be given to defining the response categories more fully, and perhaps going to four or five alternatives instead of only three.

Since the questionnaire purposefully covers heterogeneous goals and widely differing courses, most of the usual measures of reliability are inappropriate. One indication of the reliability of the questionnaire would be a fair amount of congruency among multiple respondents teaching the same course. Although this was only a pilot study and thus did not involve all of the teachers who might teach a given course, responses were received for eight courses taught by two different teachers and for three additional courses taught by three teachers each. There was substantial agreement between these teachers of the same courses regarding the amount of emphasis given to each goal statement. Only in Psychology 101 (8%), Sociology 230 (15%), and PE 128 (10%) were as many as four items answered in opposite directions. Overall, these results support both the reliability of the questionnaire and the agreement on goals among multiple teachers of the same courses. The small differences that do exist possibly reflect real differences in emphases of certain goals, or possibly indicate differing interpretations of the questions. As a follow-up, it would be helpful for teachers of the same courses to go over their responses and discuss whether their differences reflect intended or unintended differences in emphasis, or just differences in

question interpretation, and to provide feedback on this to the Evaluation Subcommittee of the General Education Committee (GEC).

As an indicator of validity of the questionnaire, overall agreement between some of the goals and the obvious courses in which these were expected to be emphasized (or not emphasized) was checked. The expected agreements were present. For example, understanding, interpreting, and transmitting mathematical materials was reported as a major emphasis in math courses, but not in English or PE; transmitting written information was reported as a major emphasis in Foundations of Writing, as well as a number of other courses; developing personal values through studying the past in relationship to the present and future was an emphasis in history courses, but not in science or PE; analyzing human development and behavior was a major emphasis in psychology, but not in science and math courses.

Questionnaire results. Responses to questionnaire items were tabulated in several ways to provide multi-level interpretation of the results. First the items were grouped by goals, and tables prepared to show total faculty response to each item related to a goal (Complete tables are available on request). The results indicate that every one of the General Education goals is indeed being addressed in many courses. Because of the diversity of courses and the disproportionate representation of PE courses, some of the goals do not at first appear to be emphasized in as high a percentage of courses as might be expected. The tabulated results must therefore be interpreted with caution. A less ambiguous picture of the results may be seen in the more detailed breakdowns.

Next, courses were grouped into Core areas and items organized within areas by Goals. The Evaluation Subcommittee and the GEC will look at these

tables closely, for they provide the most complete information on Goal emphasis by area of instruction.

Finally, when one of several courses can be selected to meet a Core area requirement (i.e, distribution requirements), they were tabulated to show the extent to which each individual course covered each Goal. Once again, small frequencies indicate the need for care in interpretation. These tables, along with the ones in the previous group where only a particular course could be selected to meet a requirement, provide the most detailed level of analysis. These will indicate to the GEC the degree to which individual courses approved to satisfy General Education requirements are in fact addressing related goals, at least so far as the instructors of these courses report. Later studies should address these same questions to students to see the extent they view the goals as being emphasized in the courses.

IMPLICATIONS OF EVALUATION OF GENERAL EDUCATION AT THE UNIVERSITY OF MONTEVALLO

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Results of the evaluation of the General Education Program have programmatic and research implications for the administration, faculty, and students of the University. Research to determine the validity of the instrumentation must be conducted. Based on valid research methodolgy, outcome results obtained determine programmatic implications.

Analysis of the six subfunctions of the COMP Test yield information for 5 areas: (a) measurement of growth from pre- to post-test of each student as well as the entire sample; (b) identification of strengths and weaknesses of Montevallo students based on a national norm; (c) establishment of the trend of entry level knowledge and skills; (d) feedback to departments on the scores of their majors; and (e) determination of the experiences which lead to growth through longitudinal tracking. These data will affect student advising, analysis of course objectives, admission procedures, and continued appraisal of the General Education goals.

Results of the faculty questionnaire provide data which impact four evaluation activities. One, reliability of the COMP Test as a measure of general education at UM can be determined by the relationship of the Core goals, the COMP objectives and courses emphases. Goals which are not being assessed by COMP can be identified. In addition, local

validity can be determined by comparison of COMP pre-test and post-test scores on objectives which receive major emphasis in courses at UM.

Review of COMP results and course emphases will determine the process of revision of courses, the second activity. Revision will occur as the Evaluation Subcommittee disseminates COMP scores and faculty questionnaire results to the faculty as a whole, and by departments. According to Ewell, "A ... characteristic of these exemplary efforts is that assessment information, once disseminated, is used to structure a campus dialogue" (p. 64). Therefore, the third evaluation activity is faculty participation in review and revision of the courses which comprise the approved core curriculum.

The fourth activity includes determination of Core goals which are not being assessed by the measures in place currently - COMP, writing samples, and LOGO. Appropriate instruments and other methods will be identified to measure these goals.

These four activities provide evidence to all constituents of the importance of each goal and of the process of evaluation. In summary, the evaluation procedures determine the future structure of the General Education Program at the University of Montevallo.

References

Ewell, P. (1984). The self-regarding institution: Information for Excellence. Boulder, CO: National Center for Higher Education Management Systems.